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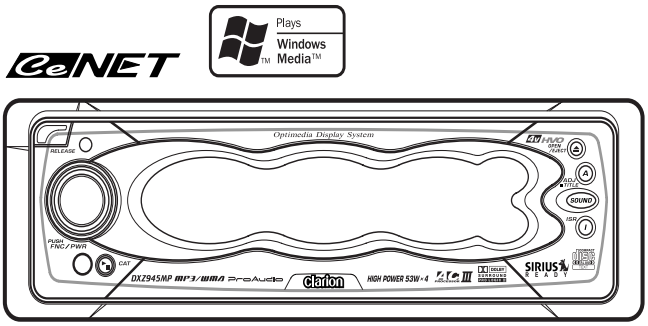
Service Manual



AM/FM CD/MP3/WMA Player
Built-in DSP/EQ With Touchpanel

Model DXZ945MP
(PE-2635B-A / For U.S.A.)

Model DXZ946MP
(PE-2635K-A / For other countries)
(PE-2635K-B / For other countries)

SPECIFICATIONS

FM tuner section

Frequency range:	87.9MHz to 107.9MHz(U.S.A.) 87.0MHz to 108.0MHz(OTHERS)
Usable sensitivity:	9dBf
50dB quieting sensitivity:	15dBf
Alternate channel selectivity:	70dB
Stereo separation:	35dB (1kHz)
Frequency response:	30Hz to 15kHz (+/-3dB)

AM tuner section

Frequency range:	530kHz to 1710kHz(U.S.A.) 531kHz to 1629kHz(OTHERS)
Usable sensitivity:	25uV

CD player section

System:	Compact disc digital audio system
Usable discs:	Compact disc
Frequency response:	5Hz to 20kHz (+/-1dB)
S/N ratio:	100dB (1kHz)
Dynamic range:	96dB (1kHz)
Distortion:	0.01%

MP3/WMA mode

MP3 sampling rate:	11.025kHz to 48kHz
MP3 bit rate:	8kbps to 320kbps/VBR
WMA bit rate:	48kbps to 192kbps
Logical format:	ISO9660 level1,2 JOLIET or Romeo

Audio section

Maximum power output:	53Wx4
Continous average power output:	18Wx4, into 4ohm, 20Hz to 20kHz, 1%THD
Line output level:	4V/F 2ch+4V/R 2ch (CD 1kHz) 4V/NON-FADER 2ch (CD 1kHz) 0.5V/2-ZONE 2ch (CD 1kHz)
Bass control action:	+/-12dB (50Hz)
Treble control action:	+/-12dB (12.5kHz)

General

Power supply voltage:	14.4V DC(10.8V to 15.6V allowable) negative ground
Current consumption:	Less than 15A,3A
Speaker impedance:	4ohm(4ohm to 8ohm allowable)
Dimensions(mm):	
Source unit;	178(W)x50(H)x155(D)
Remote control unit;	32(W)x56(H)x24(D)
Weight:	
Source unit;	1.7kg
Remote control unit;	80g(including battery)

NOTES

* Use only compact discs bearing the COMPACT disc DIGITAL AUDIO or COMPACT disc DIGITAL AUDIO TEXT mark.
* Some CDs recorded in CD-R/CD-RW mode may not be usable.
* WMA is the abbreviation of Windows Media Audio, an audio file format developed by Microsoft Corporation.
* Windows Media™, and the Windows ® logo are trademarks, or registerd trademarks of Microsoft Corporation in the United States and/or other countries.
* This product includes technology owned by Microsoft Corporation and cannot be used or distributed without a license from MSLGP.
* This product is manufactured under license from Dolby Laboratories."Dolby","Pro Logic" and the double-D symbol are trademarks of Dolby Laboratories.
* We cannot supply PWB with component parts in principle. When a circuit on PWB has failure, please repair it by component parts base. Parts which are not mentioned in service manual are not supplied.
* Specifications and design are subject to change without notice for further improvement.

COMPONENTS

PE-2635B-A,PE-2635K-A,PE-2635K-B

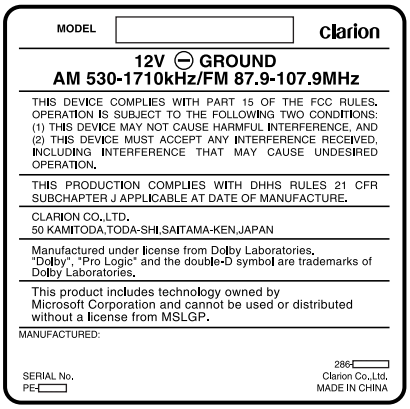
1.	Main unit	----------	1
2.	Rmote controller	RCB-164-600	1
3.	Battery(SUM-3)	----------	2
4.	Mounting bracket	300-4976-00	1
5.	Universal MTG-bracket	300-7742-00	1
6.	DCP case	335-5734-30	1
7.	Outer escutcheon(*B-A)	370-6089-00	1
8.	Outer escutcheon(*K-A/B)	370-6089-01	1
9.	Extension lead	854-6349-50	1
10.	Parts bag	----------	
10-1.	Removal key	331-2497-00	2
10-2.	Screw(M5x8)	716-0496-01	1
10-3.	Pad screw(M1.7x6)(*B-A)	716-0872-11	1

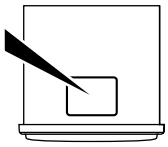
*B-A: For DXZ945MP (PE-2635B-A)
*K-A/B: For DXZ946MP (PE-2635K-A/B)

CAUTIONS

Use of controls, adjustment or performance of procedures other than those specified herein, may result in hazardous radiation exposure.

The COMPACT DISC player should not be adjusted or repaired by anyone except properly qualified service personnel.





Bottom view of DXZ945MP

To engineers in charge of repair or inspection of our products.

Before repair or inspection, make sure to follow the instructions so that customers and Engineers in charge of repair or inspection can avoid suffering any risk or injury.

1. Use specified parts.
   The system uses parts with special safety features against fire and voltage. Use only parts with equivalent characteristics when replacing them.
   The use of unspecified parts shall be regarded as remodeling for which we shall not be liable. The onus of product liability (PL) shall not be our responsibility in cases where an accident or failure is as a result of unspecified parts being used.
2. Place the parts and wiring back in their original positions after replacement or re-wiring.
   For proper circuit construction, use of insulation tubes, bonding, gaps to PWB, etc, is involved. The wiring connection and routing to the PWB are specially planned using clamps to keep away from heated and high voltage parts. Ensure that they are placed back in their original positions after repair or inspection.
   If extended damage is caused due to negligence during repair, the legal responsibility shall be with the repairing company.
3. Check for safety after repair.
   Check that the screws, parts and wires are put back securely in their original position after repair. Ensure for safety reasons there is no possibility of secondary ploblems around the repaired spots.
   If extended damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.
4. Caution in removal and making wiring connection to the parts for the automobile.
   Disconnect the battery terminal after turning the ignition key off. If wrong wiring connections are made with the battery connected, a short circuit and/or fire may occur. If extensive damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.
5. Cautions regarding chips.
   Do not reuse removed chips even when no abnormality is observed in their appearance. Always replace them with new ones. (The chip parts include resistors, capacitors, diodes, transistors, etc). The negative pole of tantalum capacitors is highly susceptible to heat, so use special care when replacing them and check the operation afterwards.
6. Cautions in handling flexible PWB
   Before working with a soldering iron, make sure that the iron tip temperature is around 270℃. Take care not to apply the iron tip repeatedly(more than three times)to the same patterns. Also take care not to apply the tip with force.
7. Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.
8. Cautions in checking that the optical pickup lights up.
   The laser is focused on the disc reflection surface through the lens of the optical pickup. When checking that the laser optical diode lights up, keep your eyes more than 30cms away from the lens. Prolonged viewing of the laser within 30cms may damage your eyesight.
9. Cautions in handling the optical pickup
   The laser diode of the optical pickup can be damaged by electrostatic charge caused by your clothes and body. Make sure to avoid electrostatic charges on your clothes or body, or discharge static electricity before handling the optical pickup.

9-1. Laser diode
   The laser diode terminals are shorted for transportation in order to prevent electrostatic damage. After replacement, open the shorted circuit. When removing the pickup from the mechanism, short the terminals by soldering them to prevent this damage.

9-2. Actuator
   The actuator has a powerful magnetic circuit. If a magnetic material is put close to it. Its characteristics will change. Ensure that no foreign substances enter through the ventilation slots in the cover.

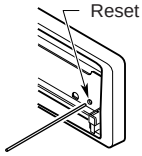
9-3. Cleaning the lens
   Dust on the optical lens affects performance. To clean the lens, apply a small amount of isopropyl alcohol to lens paper and wipe the lens gently.

ERROR DISPLAYS

	Error Display	Cause	Measure
CD/MP3/WMA	ERROR 2	A DISC is caught inside the CD deck and is not ejected.	This is a failure of CD deck's mechanism.
	ERROR 3	A DISC cannot be played due to scratches,etc.	Replace with a non-scratched,non-warped-disc.
	ERROR 6	A DISC is loaded upside-down inside the CD deck and does not play.	Eject the disc then reload it properly.
General	AMP GUARD	The speaker protection circuit is operating.During this operation, if any volume operation is performed, the display shows "AMP GUARD". "AMP GUARD" sometimes functions when special test signals are used.	Turn down sound volume. Function can also be restored by turning the power off and on again. (Speaker volume is reduced automatically when the speaker protection circuit operates).
CD changer	ERROR 2	A DISC inside the CD changer is not loaded.	This is a failure of CD changer's mechanism.
	ERROR 3	A DISC inside the CD changer cannot be played due to scratches, etc.	Replace with a non-scratched, non-warped disc.
	ERROR 6	A DISC inside the CD changer cannot be played because it is loaded upside-down.	Eject the disc then reload it properly.
DVD changer	ERROR 2	A DISC inside the DVD changer cannot be played.	This is a failure of DVD mechanism.
	ERROR 3	A DISC cannot be played due to scratches,etc.	Retry or replace with a non-scratched, non-warped-disc.
	ERROR 6	A DISC inside the DVD changer cannot be played because it is loaded upside-down.	Eject the disc then reload it properly.
	ERROR P	Parental level error	Set the correct Parental level.
	ERROR R	Region code error	Eject the disc and replace correct region code disc.

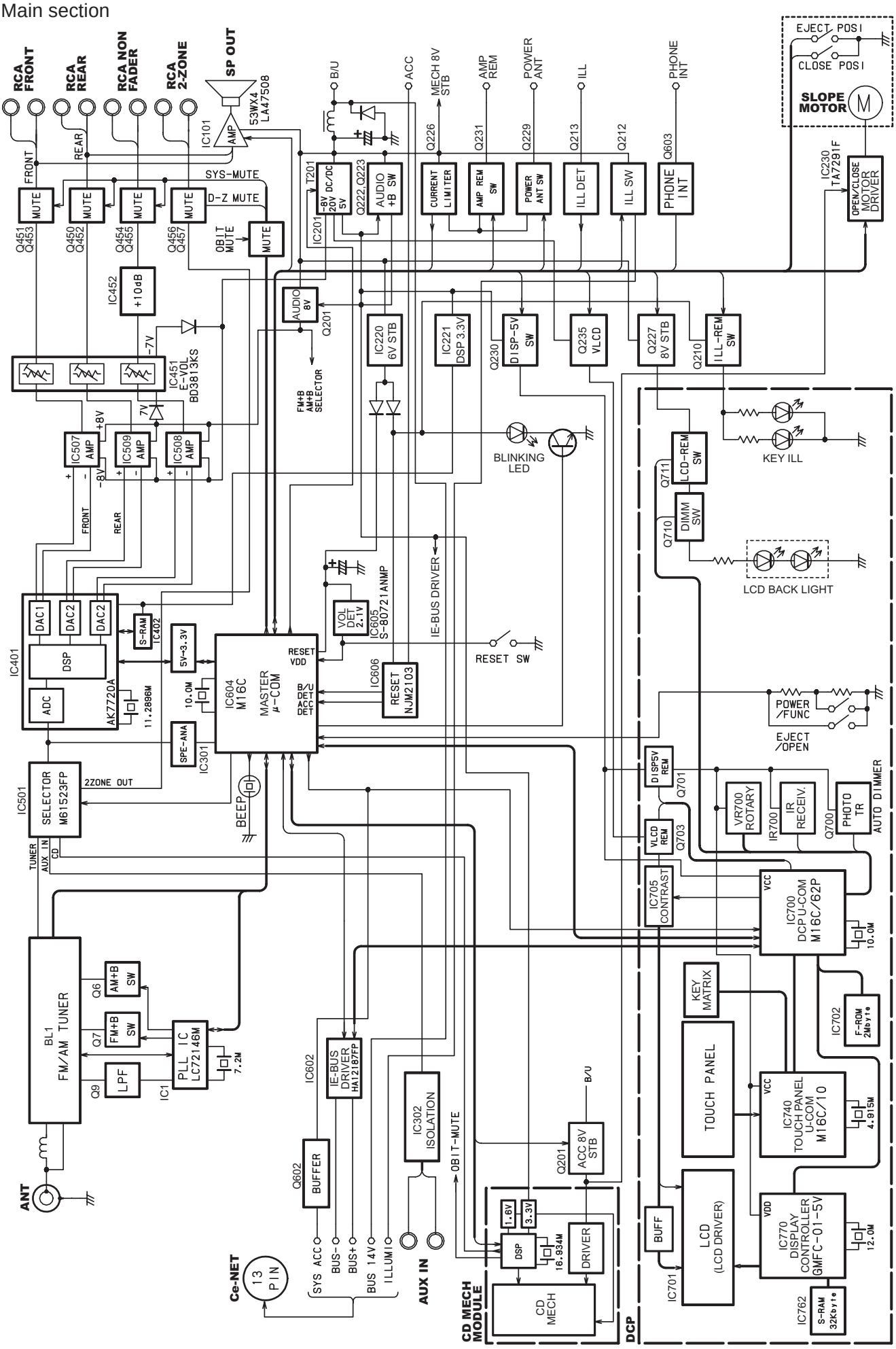
*When an optional CD/DVD changer is connected through the CeNET cable, this unit can control CD/DVD changer operations.
*If an error display other than the ones described above appears, press the reset button.

TROUBLESHOOTING

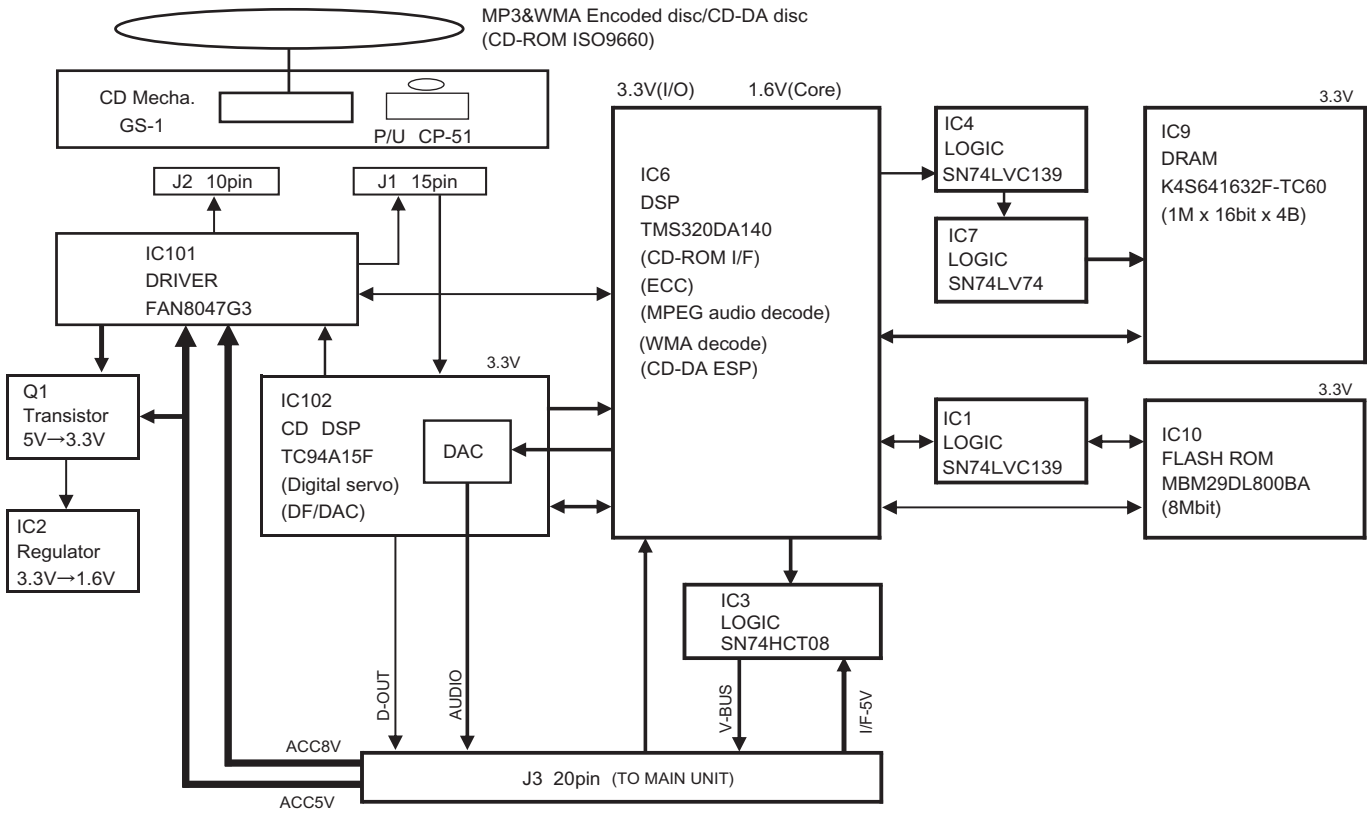
	Problem	Cause	Measure
General	Power does not turn on. (No sound is produced.)	Fuse is blown.	Replace with a fuse of the same amperage.
		Incorrect wiring.	Wire properly.
	No sound output when operating the unit with amplifiers or power antenna attached.	Power antenna lead is shorted to ground or excessive current is required for remote-on the amplifiers or power antenna.	1. Turn the unit off. 2. Remove all wires attached to the power antenna lead. Check each wire for a possible short to ground using an ohm meter. 3. Turn the unit back on. 4. Reconnect each amplifier remote wire to the turn off before power antenna lead one by one. If the amplifiers all wires are attached, use an external relay to provide remote-on voltage(excessive current required).
	Nothing happens when buttons are pressed. Display is not accurate.	The microprocessor has malfunctioned due to noise,etc.	Turn off the power , then press the [RELEASE] button and remove the DCP. Press the reset button with a thin rod. 
		DCP or main unit connectors are dirty.	Wipe the dirt off with a soft cloth moistened with cleaning alcohol.
CD/MP3/WMA	No sound heard.	There is a disc other than a compact disc or foreign matter already in place.	With the slooping console open, press and hold the [⏏] button for 3 seconds or longer.The foreign matter is forcibly ejected.
		MP3/WMA files are absent in a disc.	Write MP3/WMA files onto the disc properly.
		Files are not recognized as an MP3/WMA file.	Use MP3/WMA files encoded properly.
		File system is not correct.	Use ISO9660 level 1, 2 or JOLIET or Romeo file system.
	Sound skips or is noisy.	Disc is dirty.	Clean the disc with a soft cloth.
		Disc is heavily scratched or warped.	Replace with a disc with no scratches.
	Sound is cut or skipped. Noise is generated or noise is mixed with sound.	MP3/WMA files are not encoded properly.	Use MP3/WMA files encoded properly.
CD/MP3/WMA	Sound is bad directly after power is turned on.	Water droplets may form on the internal lens when the car is parked in a humid place.	Let dry for about 1 hour with the power on.
	Wrong filename	File system is not correct.	Use ISO9660 level 1, 2 or JOLIET or Romeo file system.
	Play list play is not performed.	File name or extension is not correct.	Use alphanumeric/ASCII characters for MP3/WMA file name. Use ".M3U" for the file extension of a play list.

BLOCK DIAGRAM

Main section



CD mechanism section



SYSTEM CHECK

The first time that this unit is turned on after wire connections are completed, this unit checks which equipment is connected. (This is called the "system check.") When the power is turned ON, and "System Check" is displayed, follow the procedure below to perform the system check.

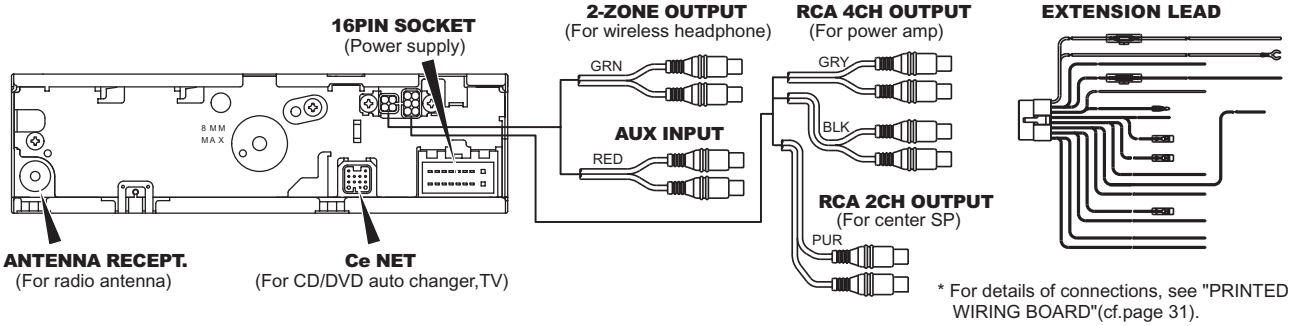
1. When "System Check" appears on the display, press the [ROTARY] knob.
   The system check starts.
   When the system check is complete,"Completed" appears on the display.
2. Press the [ROTARY] knob again.
   The main display for the radio mode appears.

CODEMATIC

This function prevents persons who do not know the touch sequence from easily operating this unit. The Touch Code display appears when DCP is attached and the power is turned ON with "CODEMATIC" set to "ON".

If you touch the display in this screen in the preset order, "SUCCESSFUL" is displayed and the power is turned OFF. When the power is next turned ON, the Touch Code display does not appear, and the main display in the radio mode or CD mode is displayed.

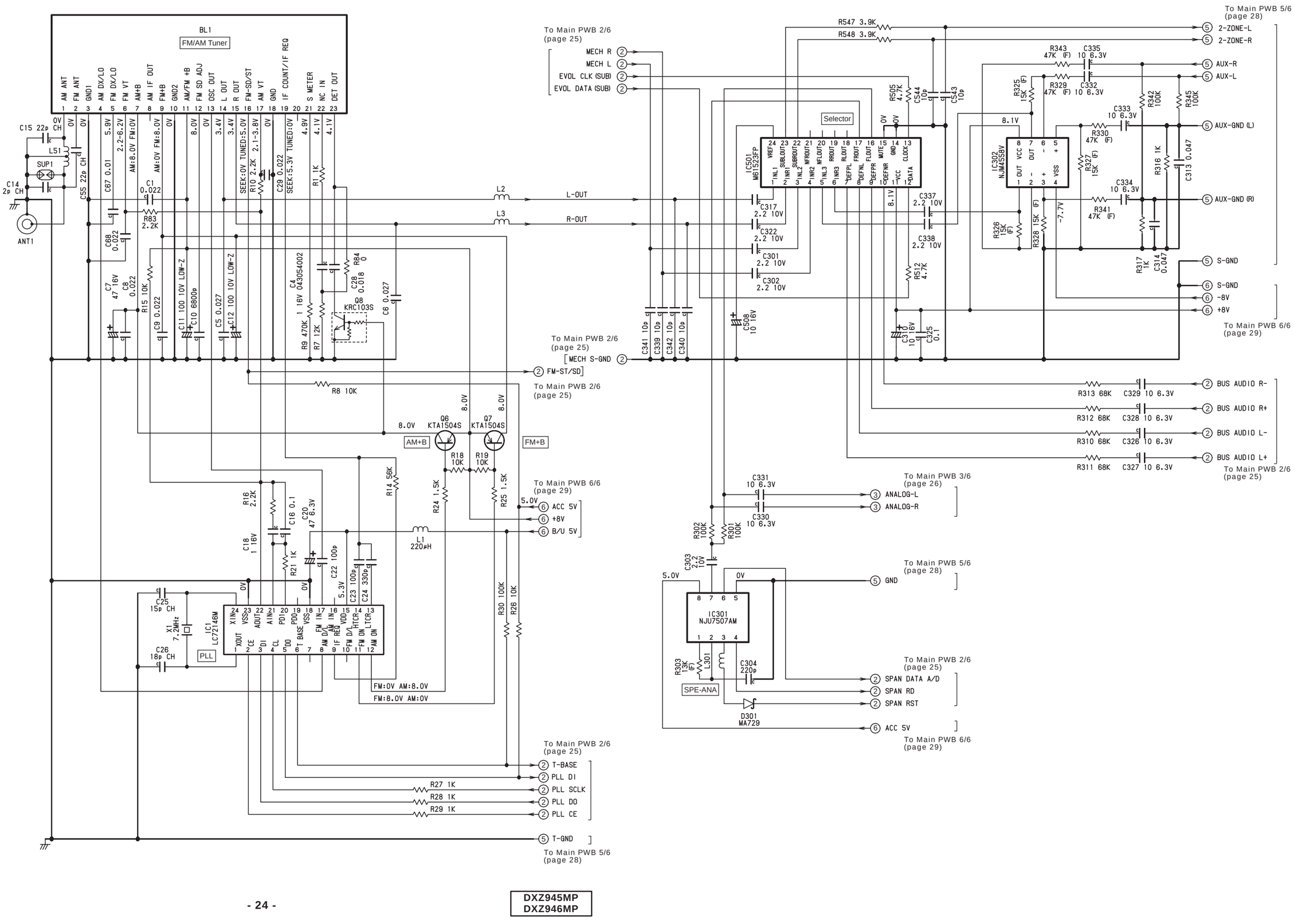
CONNECTIONS



* For details of connections, see "PRINTED WIRING BOARD"(cf.page 31).

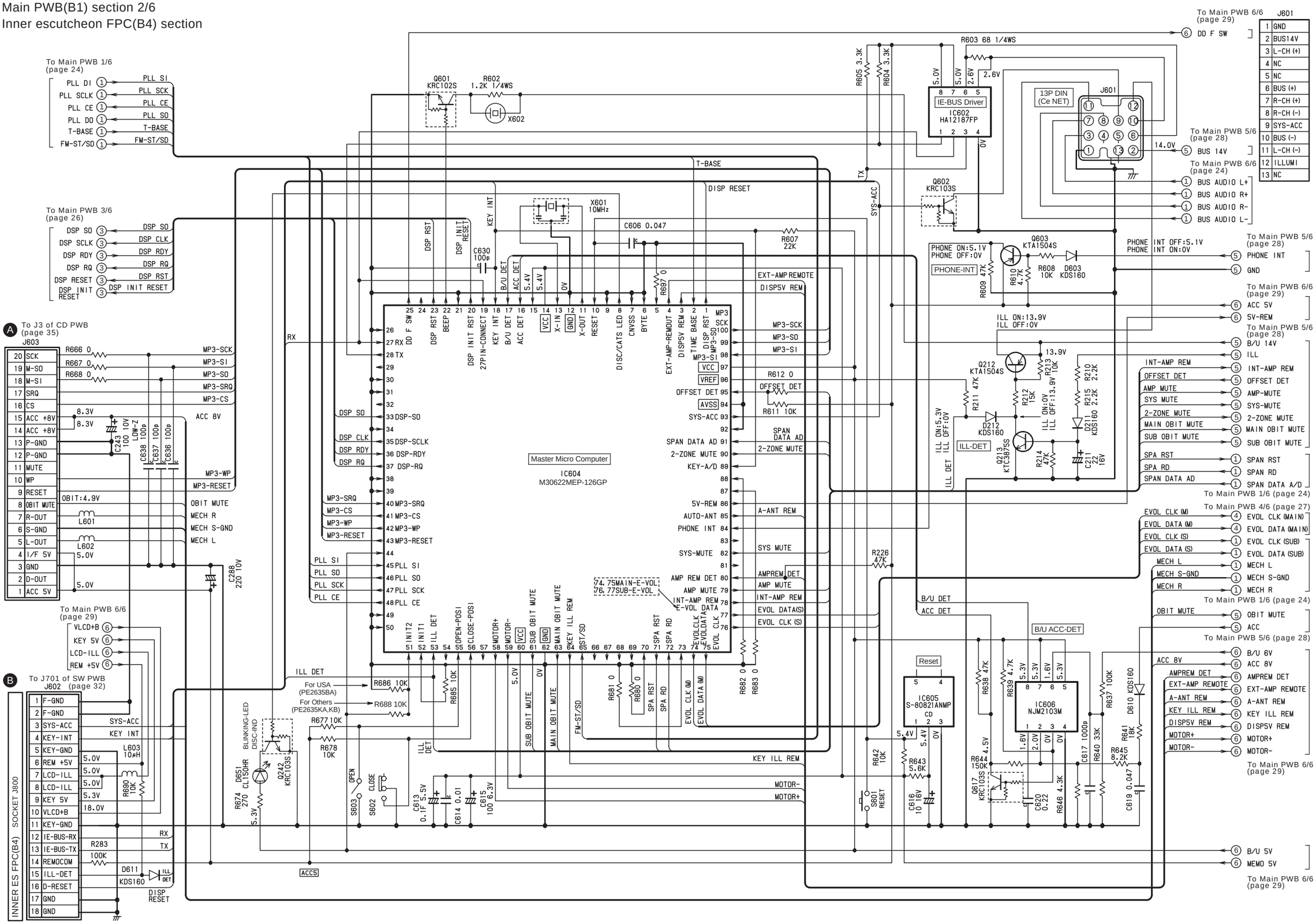
CIRCUIT DIAGRAM

Main PWB(B1) section 1/6



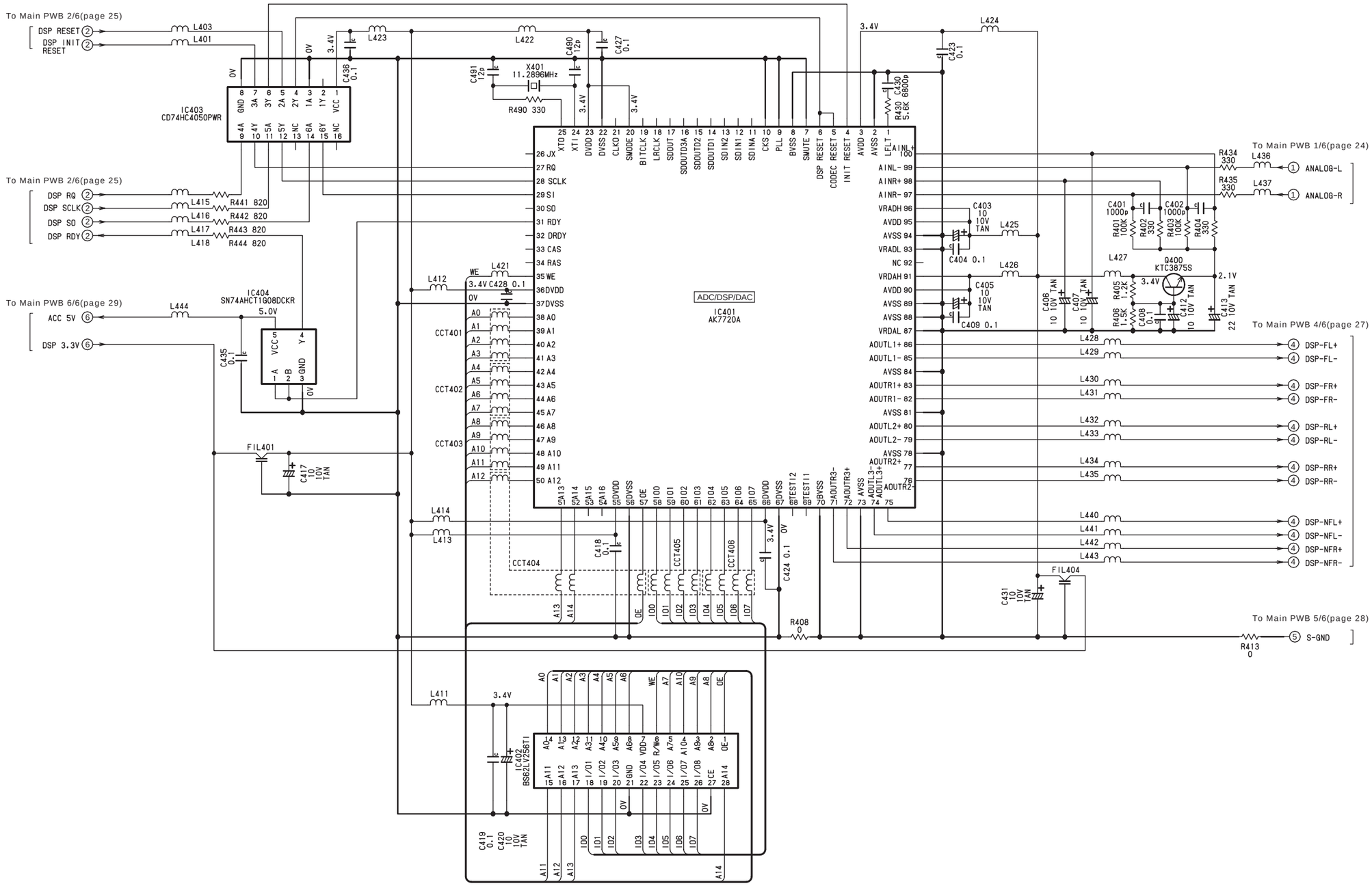
DXZ945MP
DXZ946MP

Main PWB(B1) section 2/6
Inner escutcheon FPC(B4) section

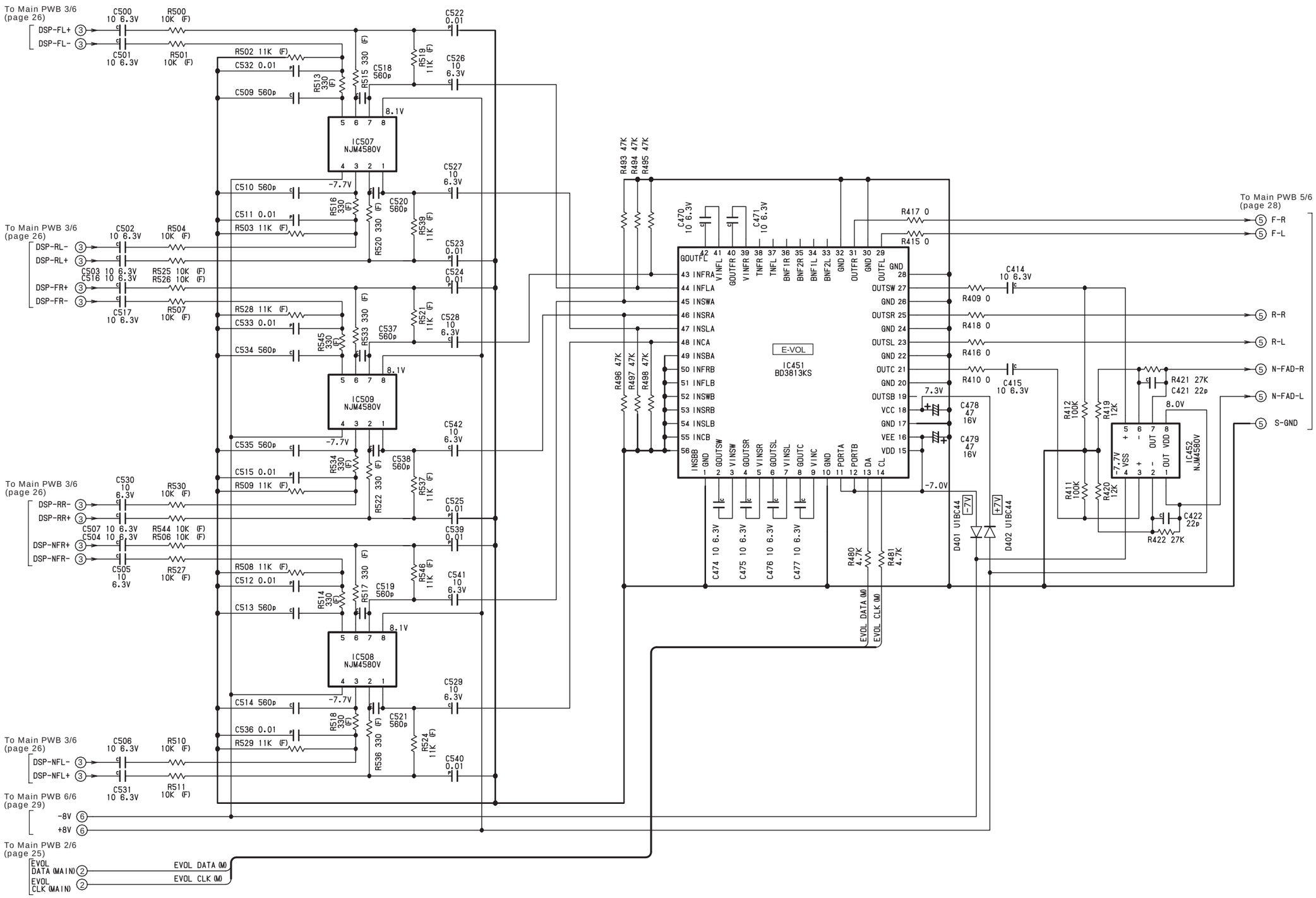


DXZ945MP
DXZ946MP

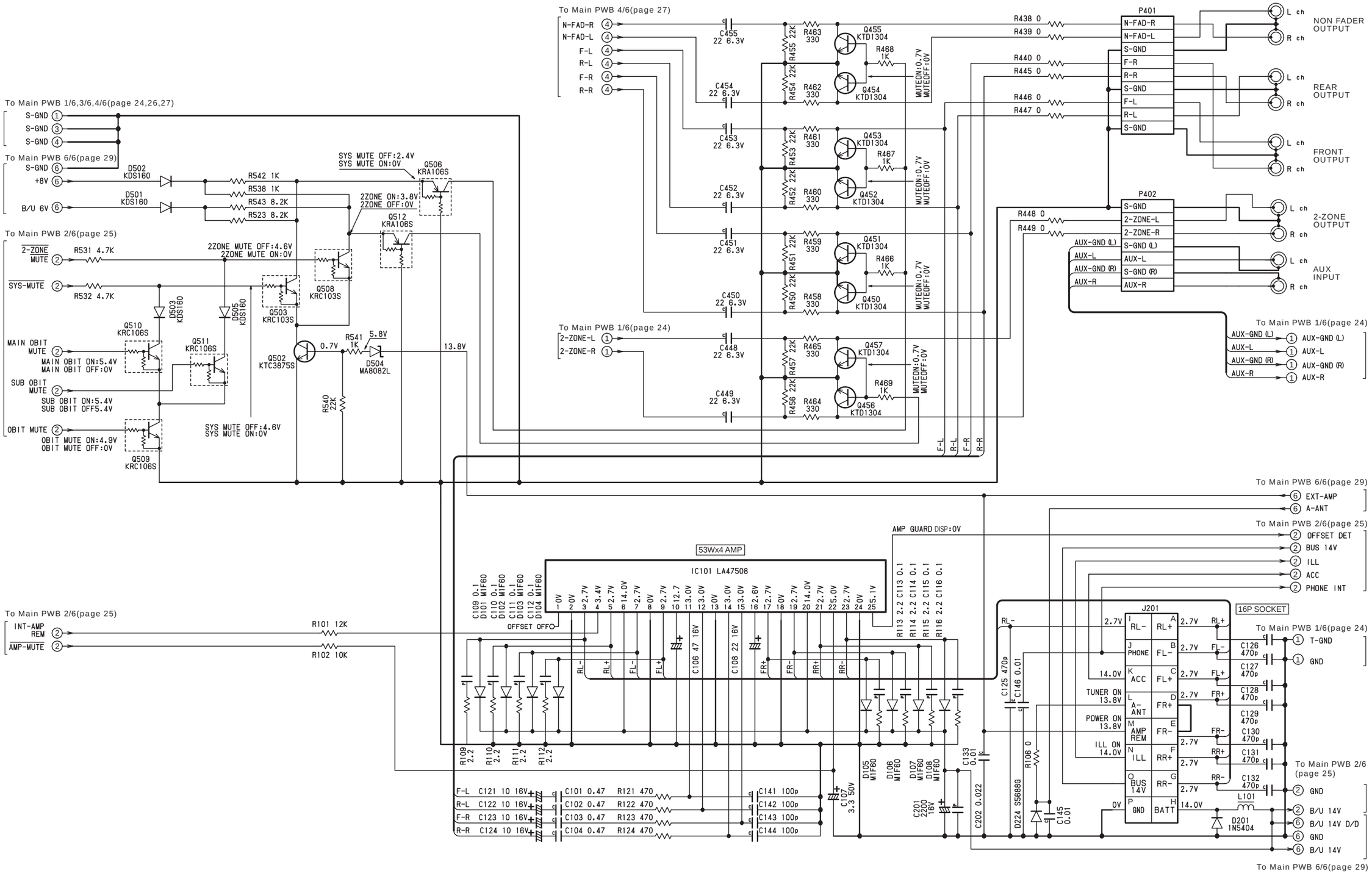
Main PWB(B1) section 3/6



DXZ945MP
DXZ946MP

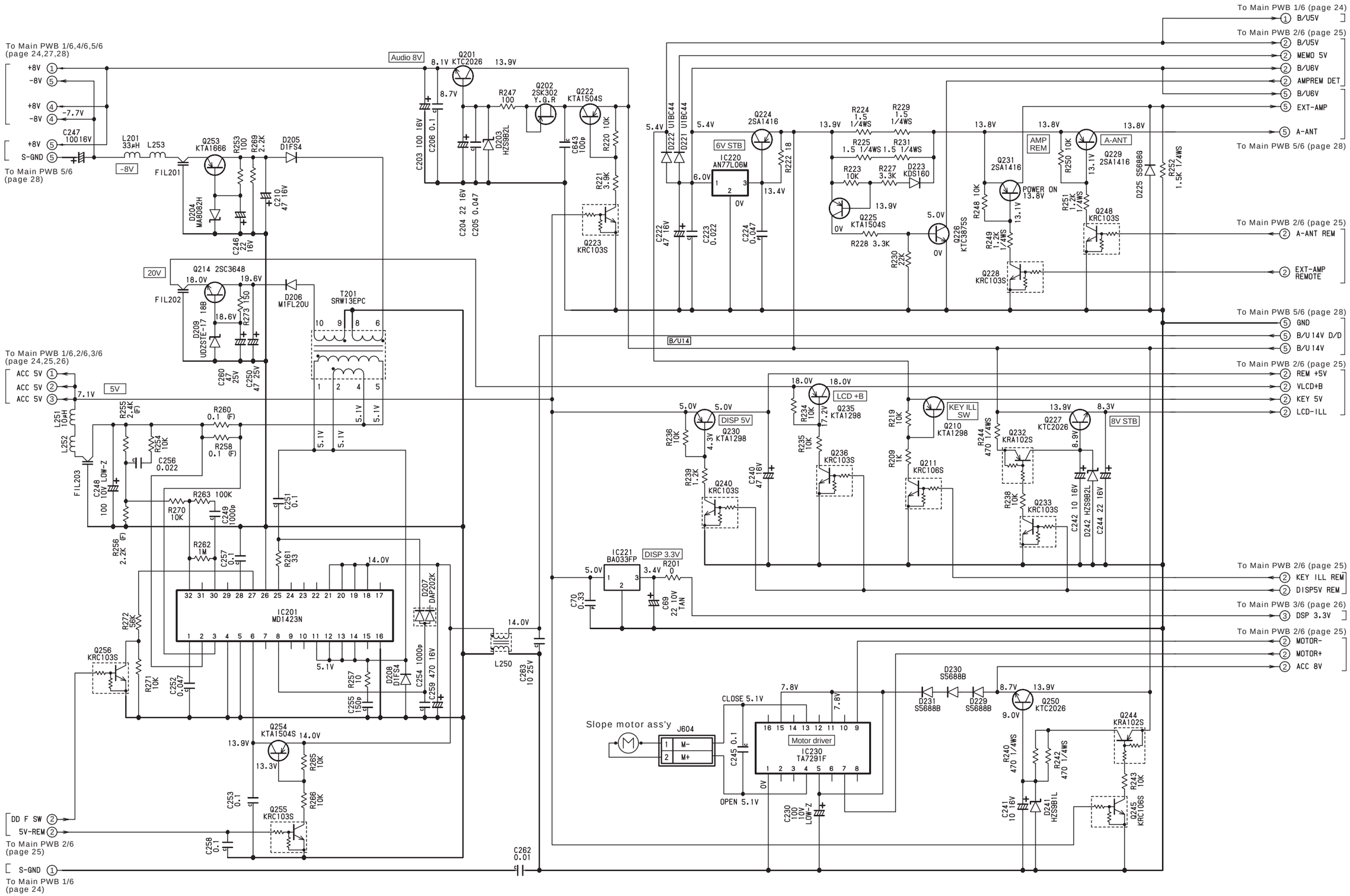

To Main PWB 3/6 (page 26)
DSP-FL+
DSP-FL-
DSP-RL-
DSP-RL+
DSP-FR+
DSP-FR-
DSP-RR-
DSP-RR+
DSP-NFR+
DSP-NFR-
DSP-NFL-
DSP-NFL+
C500 10 6.3V
C501 10 6.3V
C502 10 6.3V
C503 10 6.3V
C516 10 6.3V
C517 10 6.3V
C530 10 6.3V
C507 10 6.3V
C504 10 6.3V
C505 10 6.3V
C506 10 6.3V
C531 10 6.3V
R500 10K (F)
R501 10K (F)
R504 10K (F)
R525 10K (F)
R526 10K (F)
R507 10K (F)
R530 10K (F)
R544 10K (F)
R506 10K (F)
R527 10K (F)
R510 10K (F)
R511 10K (F)
R502 11K (F)
C532 0.01
C509 560p
R513 330 (F)
R515 330 (F)
C518 560p
R519 11K (F)
C522 0.01
C526 10 6.3V
R528 11K (F)
C533 0.01
C534 560p
R545 330 (F)
R533 330 (F)
C537 560p
R521 11K (F)
C528 10 6.3V
R508 11K (F)
C512 0.01
C513 560p
R514 330 (F)
R517 330 (F)
C519 560p
R546 11K (F)
C541 10 6.3V
R509 11K (F)
C515 0.01
C535 560p
R534 330 (F)
R522 330 (F)
C538 560p
R537 11K (F)
C525 0.01
C539 0.01
R503 11K (F)
C511 0.01
C510 560p
R516 330 (F)
R520 330 (F)
C520 560p
R539 11K (F)
C523 0.01
C524 0.01
R529 11K (F)
C536 0.01
C514 560p
R518 330 (F)
R536 330 (F)
C521 560p
R524 11K (F)
C540 0.01
C527 10 6.3V
C542 10 6.3V
C529 10 6.3V
IC507 NJM4580V
IC509 NJM4580V
IC508 NJM4580V
8.1V
-7.7V
R493 47K
R494 47K
R495 47K
R496 47K
R497 47K
R498 47K
C470 10 6.3V
C471 10 6.3V
E-VOL
IC451 BD3813KS
GOUTFL
INFRA
INFLA
INSWA
INSRA
INSLA
INCA
INSBA
INFRB
INFLB
INSWB
INSRB
INSLB
INCB
INSBB
GND
GOUTSW
VINSW
GOUTSR
VINSR
GOUTSL
VINSL
GOUTC
VINC
PORTA
PORTB
DA
CL
VINFL
GOUTFR
VINFR
TNFR
TNFL
BNF1R
BNF2R
BNF1L
BNF2L
OUTFR
OUTFL
OUTSW
OUTSR
OUTSL
OUTC
OUTSB
VCC
VEE
VDD
7.3V
-7.0V
C478 47 16V
C479 47 16V
C474 10 6.3V
C475 10 6.3V
C476 10 6.3V
C477 10 6.3V
R480 4.7K
R481 4.7K
D401 U1BC44
D402 U1BC44
R417 0
R415 0
R409 0
R418 0
R416 0
R410 0
C414 10 6.3V
C415 10 6.3V
R412 100K
R419 12K
R411 100K
R420 12K
R421 27K
C421 22p
C422 22p
R422 27K
8.0V
IC452 NJM4580V
EVOL DATA (M)
EVOL CLK (M)
To Main PWB 5/6 (page 28)
F-R
F-L
R-R
R-L
N-FAD-R
N-FAD-L
S-GND
To Main PWB 6/6 (page 29)
-8V
+8V
To Main PWB 2/6 (page 25)
EVOL DATA (MAIN)
EVOL CLK (MAIN)

Main PWB(B1) section 5/6



DXZ945MP
DXZ946MP

Main PWB(B1) section 6/6



Main PWB(B1) section
Inner escutcheon FPC(B4) section

A	REAR L-CH(+)	GRN
B	FRONT L-CH(-)	WHT/BLK
C	FRONT L-CH(+)	WHT
D	FRONT R-CH(+)	GRY
E	FRONT R-CH(-)	GRY/BLK
F	REAR R-CH(+)	PUR
G	REAR R-CH(-)	PUR/BLK
H	BACK UP	YEL
I	REAR L-CH(-)	GRN/BLK
J	PHONE INT	BRN
K	ACC	RED
L	AUTO ANT	BLU
M	REMOTE	BLU/WHT
N	ILLUMI	ORG/WHT
O	BACK UP(BUS)	YEL
P	GND	BLK

16P Socket

13P DIN
(Ce NET)

1	GND	8	R-CH(-)
2	BACK UP 14V	9	SYS-ACC
3	L-CH(+)	10	BUS(-)
4	N.C	11	L-CH(-)
5	N.C	12	ILLUMI
6	BUS(+)	13	N.C
7	R-CH(+)		

RCA 6CH cord
(855-5424-50)

RCA 4CH cord
(855-5493-50)

ANT Recept

H.BACK UP(YEL)
P.GND(BLK)
O.BACK UP(BUS)(YEL)
K.ACC(RED)
FUSE(15A) 120-0150-00
G.REAR R-CH(-)(PUR/BLK)
FUSE(3A) 120-0030-00
F.REAR R-CH(+)(PUR)
N.ILLUMI(ORG/WHT)
E.FRONT R-CH(-)(GRY/BLK)
M.REMOTE(BLU/WHT)
L.AUTO ANT(BLU)
D.FRONT R-CH(+)(GRY)
C.FRONT L-CH(+)(WHT)
J.PHONE INT(BRN)
B.FRONT L-CH(-)(WHT/BLK)
I.REAR L-CH(-)(GRN/BLK)
A.REAR L-CH(+)(GRN)

Extension lead
(854-6349-50)

J800
Inner escutcheon
FPC(B4)
B
To J701 of SW PWB
(page 33)

Slope motor ass'y

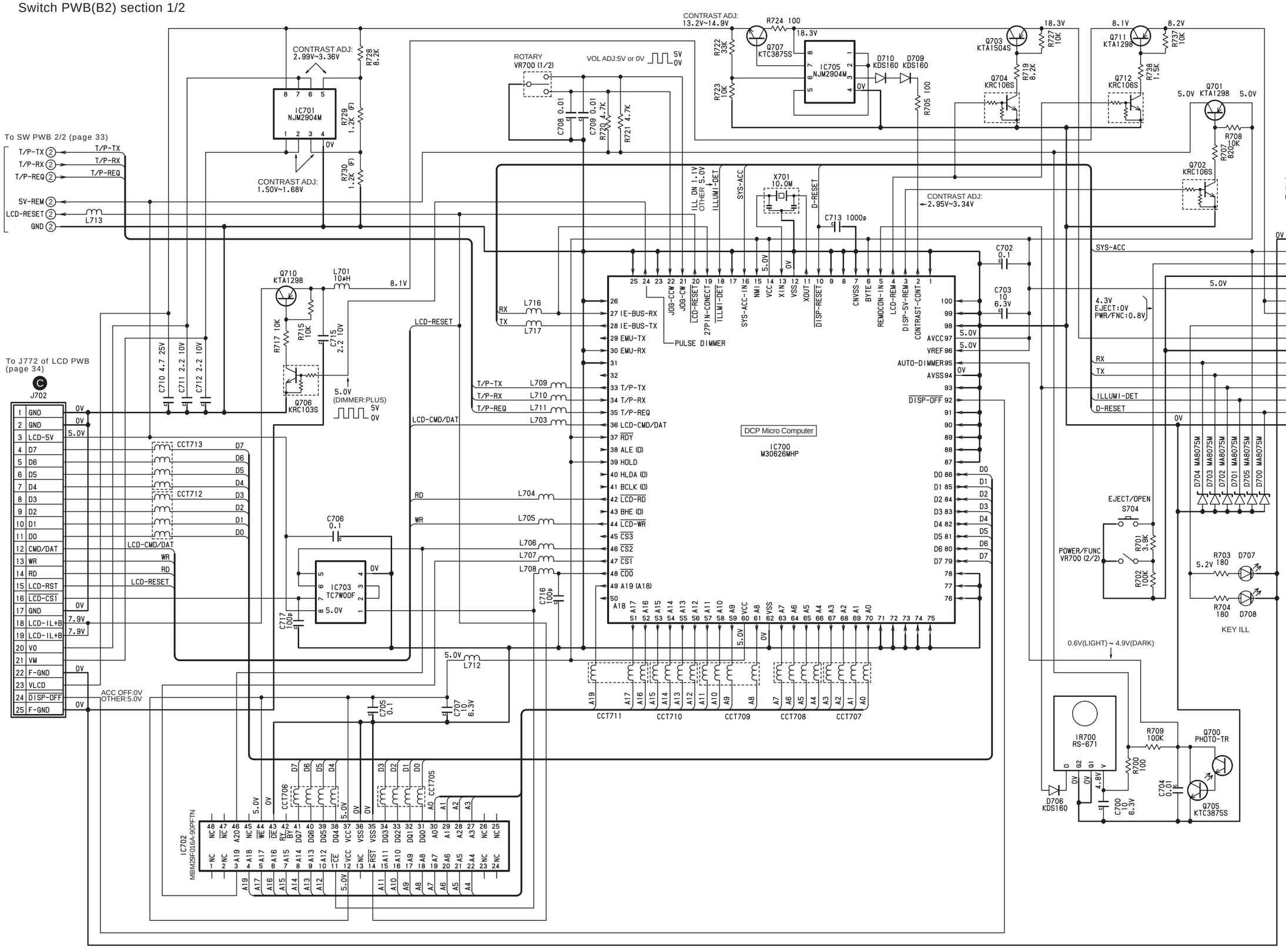
Flat wire
(816-2643-50)
A
To J3 of CD PWB
(page 36)

Main PWB(B1)
COMPONENT SIDE

DXZ945MP
DXZ946MP

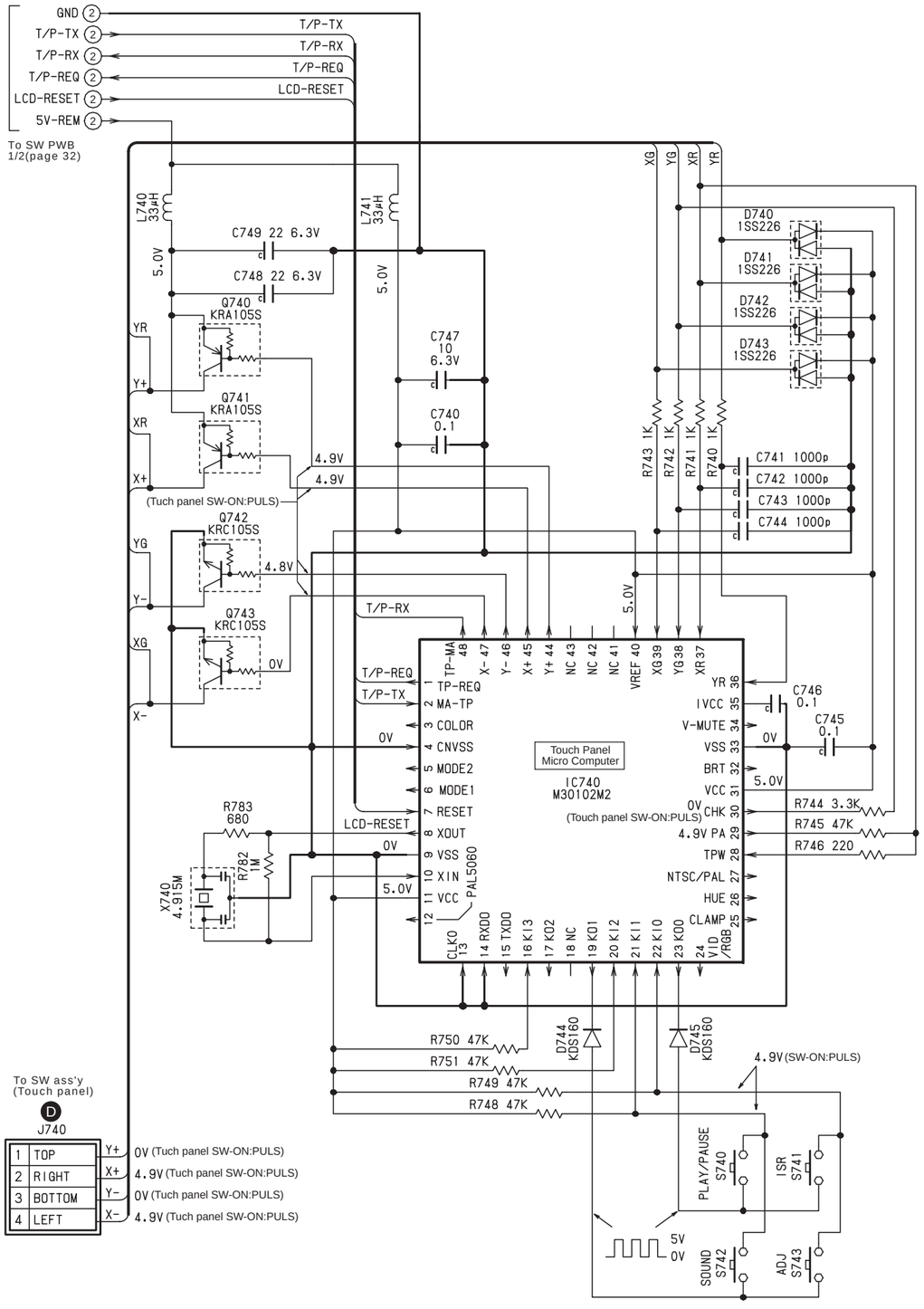
CIRCUIT DIAGRAM

Switch PWB(B2) section 1/2



DXZ945MP
DXZ946MP

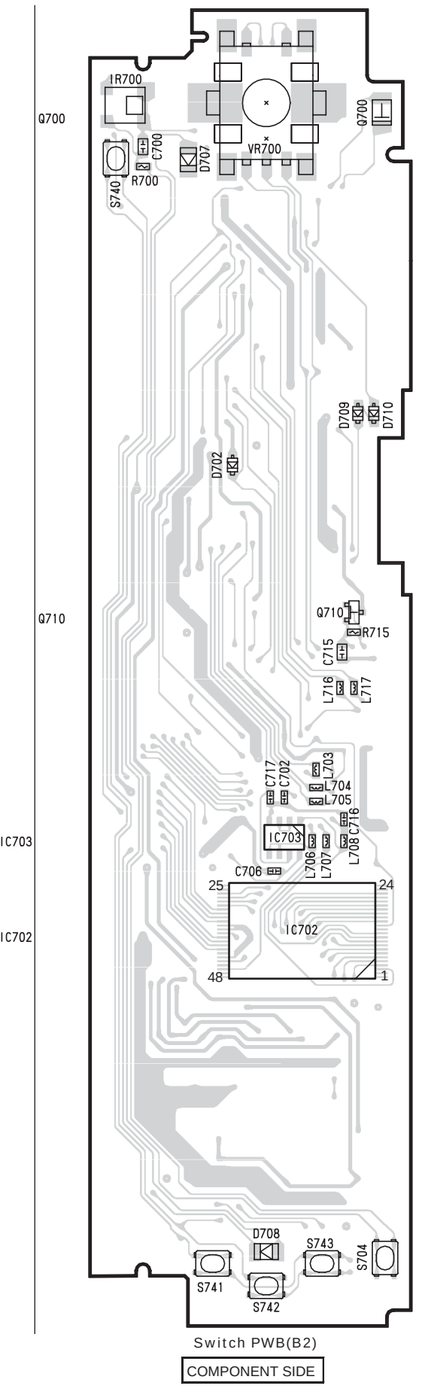
Switch PWB(B2) section 2/2



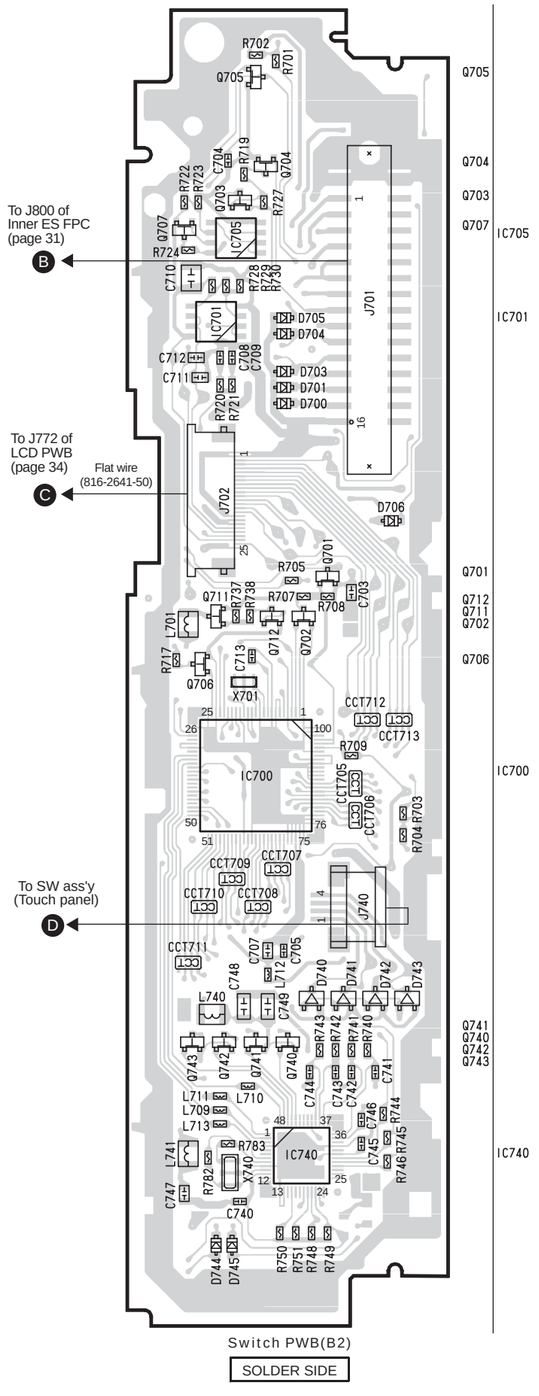
PRINTED WIRING BOARD

Switch PWB(B2) section

Caution:
COMPONENT SIDE: Parts on the component side seen from the component side are indicated.
SOLDER SIDE: Parts on the solder side seen from the solder side are indicated.



Switch PWB(B2)
COMPONENT SIDE

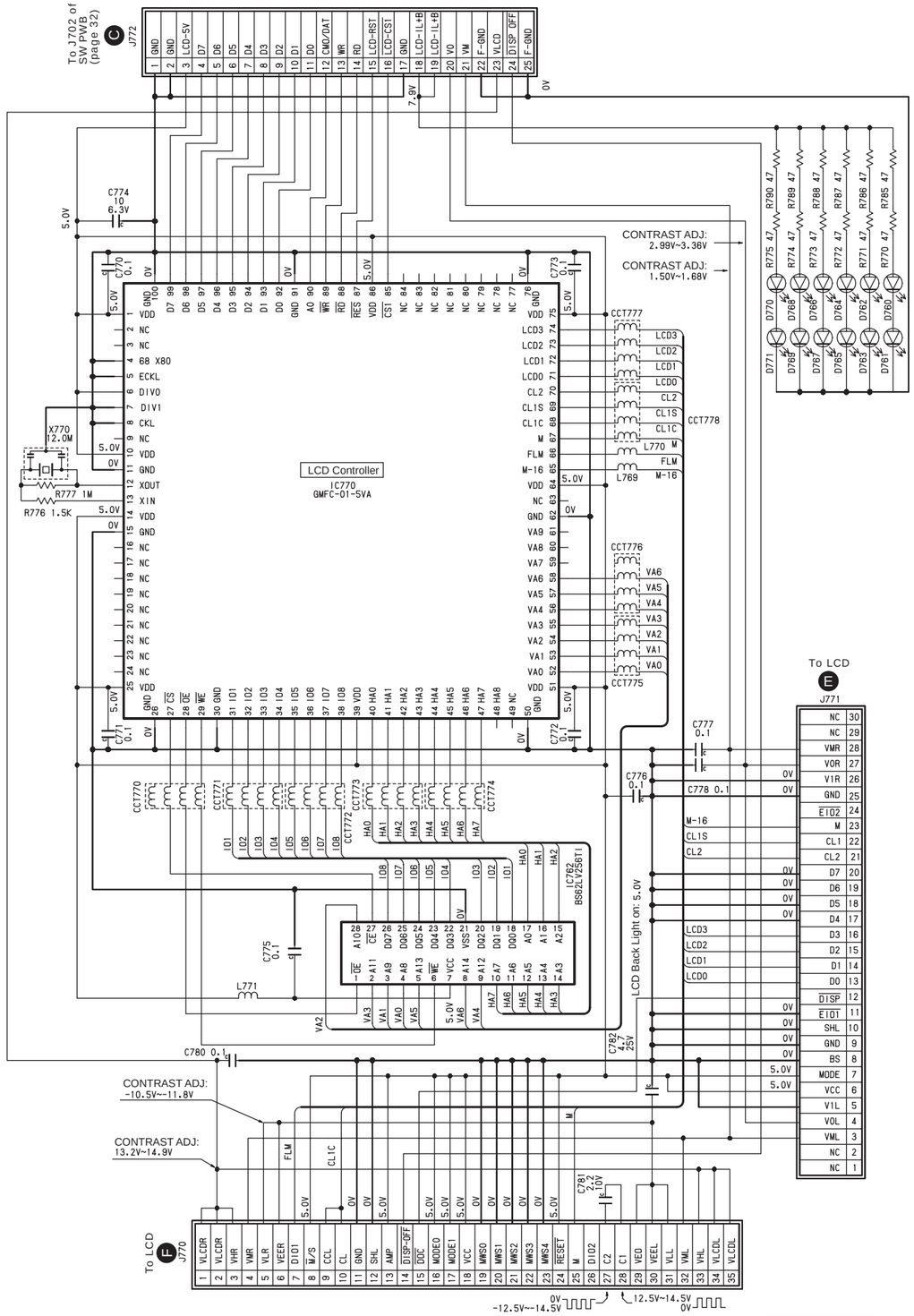


Switch PWB(B2)
SOLDER SIDE

DXZ945MP
DXZ946MP

CIRCUIT DIAGRAM

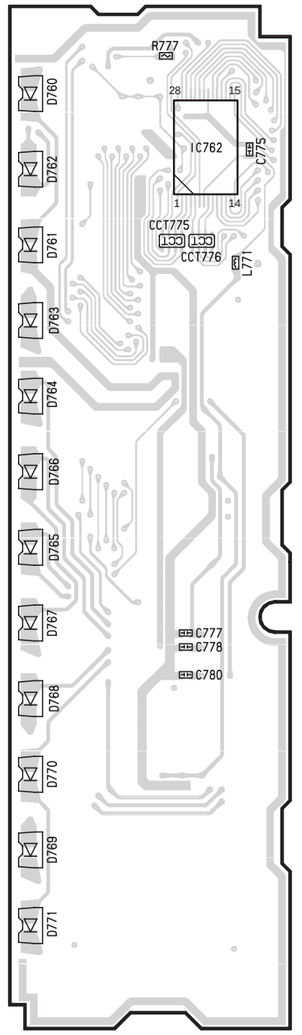
LCD PWB(B3) section



PRINTED WIRING BOARD

LCD PWB(B3) section

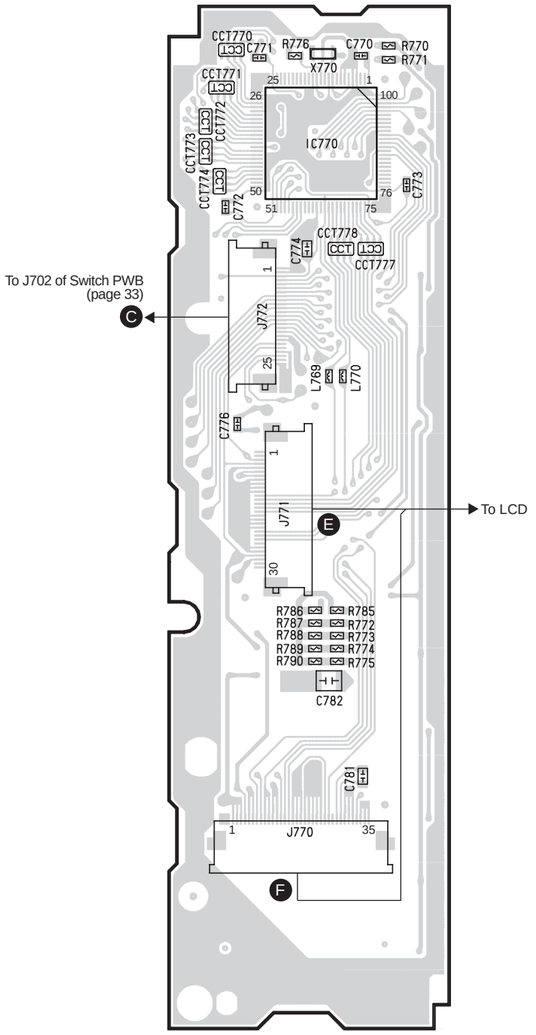
Caution:
COMPONENT SIDE: Parts on the component side seen from the component side are indicated.
SOLDER SIDE: Parts on the solder side seen from the solder side are indicated.



LCD PWB(B3)

COMPONENT SIDE

To J702 of Switch PWB (page 33)



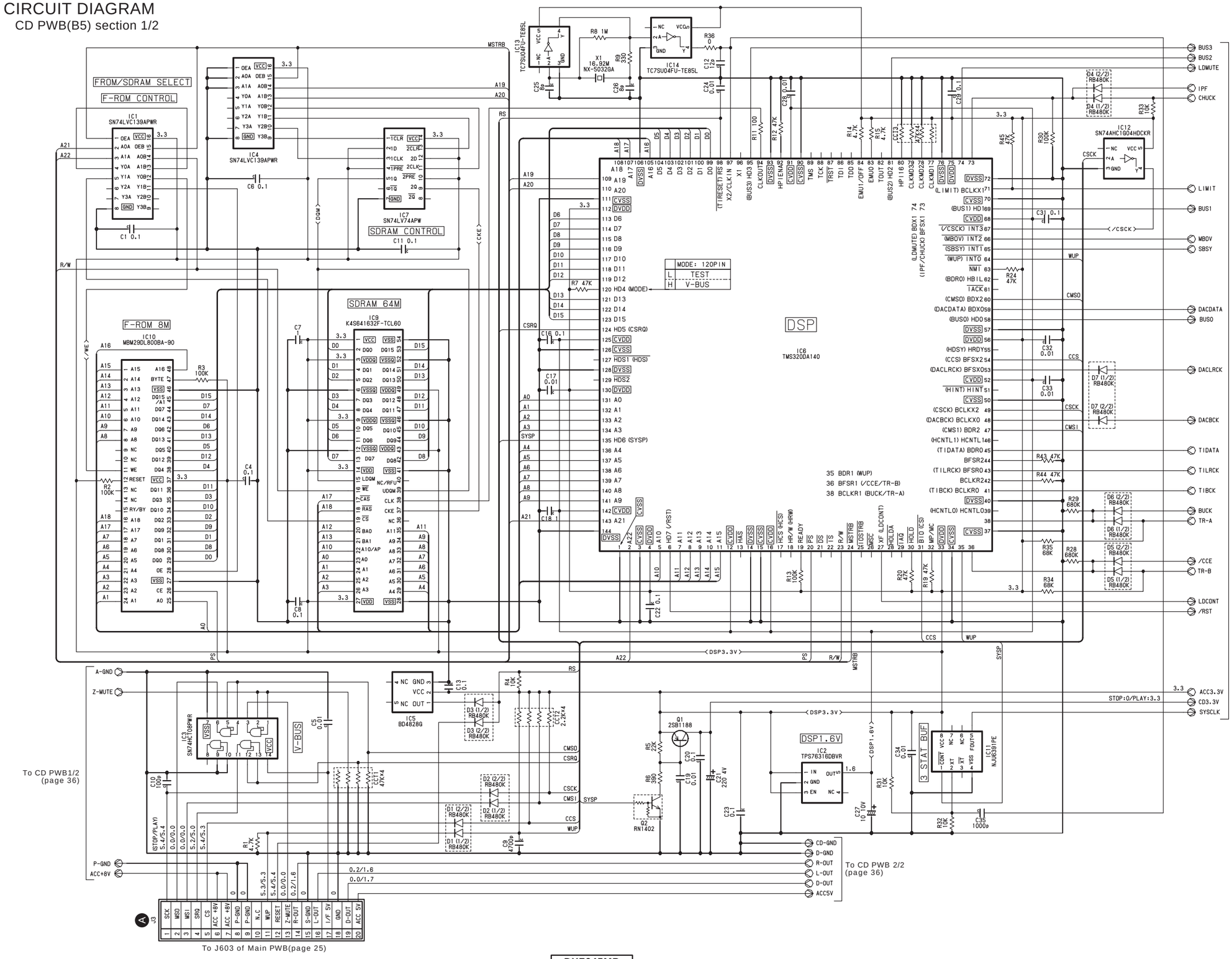
LCD PWB(B3)

SOLDER SIDE

DXZ945MP
DXZ946MP

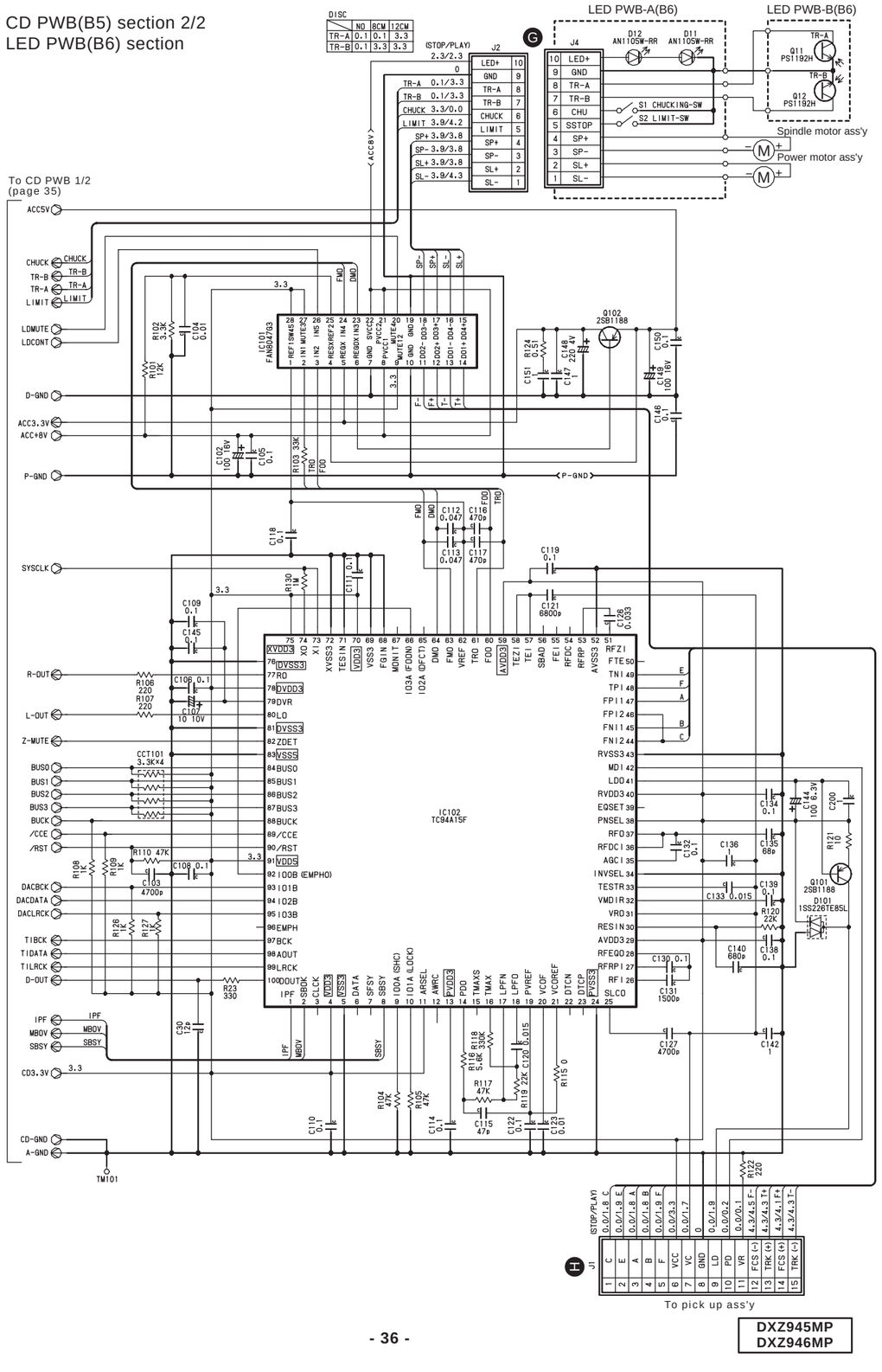
CIRCUIT DIAGRAM

CD PWB(B5) section 1/2



DXZ945MP
DXZ946MP

CD PWB(B5) section 2/2
LED PWB(B6) section



PRINTED WIRING BOARD

CD PWB(B5) section
LED PWB(B6) section